

WHAT IS CLAIMED IS:

1 1. A method for providing the communication of information services
2 between customer premises equipment (CPE) at a customer's premises and a source of the
3 information services, comprising:

4 providing a demarcation device at the customer's premises, wherein the
5 demarcation device defines an interface between an external transport medium that is
6 substantially external to the customer's premises and an internal transport medium that is
7 substantially internal to the customer's premises;

8 establishing a virtual private network (VPN) between the demarcation device
9 and the source of information services;

10 establishing a virtual local area network (VLAN) between the demarcation
11 device and the CPE.

1 2. The method of claim 1, further comprising:

2 receiving a signal at the demarcation device from the source of the information
3 services via the VPN;

4 consulting a routing table at the demarcation device to determine the VLAN of
5 the CPE; and

6 routing the signal to the CPE via the VLAN.

1 3. The method of claim 1, wherein establishing a VLAN between the
2 demarcation device and the CPE comprises:

3 establishing an interface between the CPE and the demarcation device;

4 transmitting information from the CPE to the demarcation device via the
5 interface, wherein the information comprises an address of the CPE; and

6 writing at least a portion of the information to a routing table, wherein the
7 routing table also comprises a VLAN tag that identifies the VLAN between the CPE and the
8 demarcation device.

1 4. The method of claim 3, wherein the interface between the CPE and the
2 demarcation device comprises a selection from the group consisting of fiber optic connection,
3 coaxial connection, twisted pair copper wire connection, and wireless connection.

1 5. The method of claim 1, wherein establishing a VPN between the
2 demarcation device and the source of information services comprises:

3 establishing an interface between the demarcation device and the source of
4 information services; and

5 writing information to a routing table at the demarcation device, wherein the
6 information identifies a service and a termination location of the VPN.

1 6. The method of claim 5, wherein the service comprises a selection from
2 the group consisting of voice, data, and video.

1 7. The method of claim 5, wherein the service comprises a selection from
2 the group consisting of video on demand, voice over internet protocol, broadband Internet
3 access, television programming, online gaming, music on demand, instant messaging, and
4 alarm systems signaling.

1 8. The method of claim 5, wherein the service comprises utility
2 monitoring and control.

1 9. The method of claim 5, wherein the interface between the demarcation
2 device and the source of information services comprises a selection from the group consisting
3 of fiber optic connection, coaxial connection, twisted pair copper wire connection, wireless
4 connection, and satellite-based connection.

1 10. A demarcation device configured to facilitate the communication of
2 information services between customer premises equipment (CPE) at a customer's premises
3 and a source of the information services, comprising:

4 means for establishing a virtual private network (VPN) with a source of
5 information services, wherein signals are received at the demarcation device from the source
6 of information services via an interface comprising an external transport medium
7 substantially external to the customer's premises;

8 means for establishing a virtual local area network (VLAN) with the CPE,
9 wherein signals are sent from the demarcation device to the CPE via an interface comprising
10 an internal transport medium substantially interior to the customer's premises; and

11 a routing table that stores information used to map signals from the VPN of
12 the source of information services to the VLAN of the CPE.

1 11. The device of claim 10, wherein the interface between the CPE and the
2 demarcation device comprises a selection from the group consisting of fiber optic connection,
3 coaxial connection, twisted pair copper wire connection, and wireless connection.

1 12. The device of claim 10, wherein the service comprises a selection from
2 the group consisting of voice, data, and video.

1 13. The device of claim 10, wherein the service comprises a selection from
2 the group consisting of video on demand, voice over internet protocol, broadband Internet
3 access, television programming, online gaming, music on demand, instant messaging, and
4 alarm systems signaling.

1 14. The device of claim 10, wherein the service comprises utility
2 monitoring and control.

1 15. The device of claim 10, wherein the interface between the demarcation
2 device and the source of information services comprises a selection from the group consisting
3 of fiber optic connection, coaxial connection, twisted pair copper wire connection, wireless
4 connection, and satellite-based connection.

1 16. A method of registering customer premises equipment (CPE) at a
2 customer's premises with a demarcation device to receive information services from a source
3 of the information services via a virtual private network (VPN), comprising:

4 establishing a VPN between the demarcation device and the source of
5 information services, wherein the VPN is comprised by an external transport medium
6 substantially exterior to the customer's premises;

7 establishing an interface between the CPE and the demarcation device,
8 wherein the interface is comprised by an internal transport medium substantially internal to
9 the customer's premises;

10 establishing a virtual local area network (VLAN) between the CPE and the
11 demarcation device by transmitting an address of the CPE to the demarcation device and
12 storing at least a portion of the address in a routing table of the demarcation device, wherein
13 the routing table comprises a CPE receiving device.

1 17. A demarcation device configured to facilitate the communication of
2 information services between customer premises equipment (CPE) at a customer's premises
3 and a source of the information services, comprising:

4 an interface between an internal transport medium substantially internal to the
5 customer's premises and an external transport medium substantially external to the
6 customer's premises; and

7 a microserver programmed to:

8 serve as a termination point for a virtual private network (VPN)
9 between the demarcation device and the source of information services;

10 serve as a termination point for a virtual local area network (VLAN)
11 between the demarcation device and the CPE; and

12 map signals received from the source of information services via the
13 VPN to the CPE via the internal transport medium.

1 18. The demarcation device of claim 17, wherein the microserver is further
2 programmed to establishing a virtual local area network (VLAN) with the CPE by receiving
3 an address of the CPE and storing at least a portion of the address in a routing table, wherein
4 the routing table comprises a VLAN tag that identifies a VLAN between the demarcation
5 device and the CPE.

1 19. The demarcation device of claim 17, wherein the service comprises a
2 selection from the group consisting of voice, data, and video.

1 20. The demarcation device of claim 17, wherein the service comprises
2 utility monitoring and control.